OPEN PEER REVIEW REPORT 1

Name of journal: Neural Regeneration Research
Manuscript NO: NRR-D-20-00833
Title: The antiaging role of oxytocin
Reviewer's Name: Benjamin Buemann
Reviewer's country: Denmark

COMMENTS TO AUTHORS

The present review describes the possible anti-aging effects of oxytocin by focusing on its apparent preserving impact on telomeres. The importance of social interactions is emphasized. It is a manuscript with some interesting aspects.

I have a couple of inputs:

The authors should not overlook the well documented profound oxytocin releasing effect of orgasms, per se, outlined in a recent paper:

Buemann B Uvnäs-Moberg K. Oxytocin may have a therapeutical potential against cardiovascular disease. Possible pharmaceutical and behavioral approaches Medical Hypotheses 2020; 138.

In the context of the present manuscript it could also be very relevant to comment on an article reporting "sexual intimacy" as the strongest statistical predictor of telomere length among several indicators of health, stress and relationship satisfaction:

Cabeza de Baca T, Epel ES, Robles TF, Coccia M, Gilbert A, Puterman E, Prather AA. Sexual intimacy in couples is associated with longer telomere length. Psychoneuroendocrinology 2017; 81: 46-51.

Frequent sexual pleasure may therefore be regarded just as important as positive social interactions to ensure the beneficial health effects of oxytocin. The author may wish to discuss this issue.

Furthermore, the importance of neural stem cells to protect the function of the hypothalamus could be emphasized by referring to the article:

Zhang Y, Kim MS, Jia B, Yan J, Zuniga-Hertz JP, Han C, Cai D. Hypothalamic stem cells control ageing speed partly through exosomal miRNAs. Nature 2017; 548(7665): 52-57.

This would add more relevance to the journal and can be seen in the context that oxytocin is released to a great extent also directly into the hypothalamus when the oxytocinergic neurons are firing for hormonal release.